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I. Introduction.

The history of the Office of Scientific Intelligence, as recorded in the sections which follow, is not a chronological record of events. It is more an effort to present a picture of the origin, growth, and the factors affecting the growth of a new concept in intelligence. This concept, in essence, is best stated by a question. Can a central organization be given the authority for and provide itself with the leadership and professional competence whereby an entire substantive area of intelligence, in this case scientific and technical, can be made to function on a cooperative community basis?

The concept has not yet been proven, either affirmatively or negatively, and the history which follows is therefore incomplete. Furthermore, there is a fundamental aspect to the concept which must not be overlooked. Specifically, this concept must apply to all substantive areas of intelligence if it is to be successful in one, and it must apply to all the functions of intelligence, from collection through correlation to presentation.

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Since OSI was established relatively late in the initial CIA framework, the office found a pattern of day to day activity already established -- and this pattern was neither compatible with the OSI concept nor was it readily susceptible to change. Furthermore, the initial OSI staff, partly due to its own inexperience, found it difficult to reconcile its views with those of the more experienced CIA components as well as with related activities in other agencies.

The result, as reflected in the pages which follow, was a clash of principles and methods which inevitably led to clashes in personalities. These clashes are not emphasized in the history, however, because they are overshadowed by actual accomplishments wherein community effort was established in specific instances and did prove to be effective.

The OSI concept might have been eliminated at the outset had it been based only on theory and not backed up by some significant factors. While these factors apply to most areas of intelligence,

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they stand out most clearly in the scientific and technical intelligence fields. The first factor, which in itself makes a cooperative community effort essential, lies in the extremely limited number of competent scientific and technical personnel trained in intelligence. This factor is even more critical because of the highly competitive manpower situation with respect to scientific and technical personnel in general. The second factor is based on the inherent difficulties in the collection of scientific and technical intelligence wherein the quality of the product is most dependent upon the competence of the collector, backed by coordinated guidance on what is required. The third, and perhaps most cogent factor, lies in the community nature of scientific and technical intelligence itself. The same new scientific discovery or technical device may have implications in different respects for each of the departments of the government, and in the aggregate, may assume major importance as it relates to national security. Only by a community effort, centrally coordinated, can information of this nature receive the attention and objective

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analysis required in the national interest.

All of these factors were in the minds of the groups which studied scientific intelligence -- the Eberstadt Committee of the Hoover Commission, the Dulles Committee and others. While they expressed their concern over the existing situation in varying ways, in effect they were unanimous in the need for positive and effective leadership on the part of some central organization. The OSI history is understandable if accepted as the outgrowth of the concept established by these groups and based upon the real factors noted above.

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II. Events leading up to the establishment of OSI.

Little scientific and technical intelligence activity, as such, existed in the U.S. Government prior to WWII. Even during WWII, victory in which was achieved largely through U.S. technological supremacy, the U.S. scientific and technical intelligence effort was conducted more or less independently by the technical subdivisions of OSRD and the separate armed services.

This was in contrast to the British effort where, under pressure of circumstances, a systematic organization was established early in WWII for the purpose of obtaining intelligence on enemy research and development activities and new weapons. The British

program developed around Dr. R. V. Jones in the Intelligence Branch of the Air Ministry and played a major part in the British defense against German blind bombing and V-weapons. Its impetus came from the necessity of developing every possible means of countering these new weapons, and the effort was concentrated primarily on the electronic equipment which was essential to the range, accuracy or period of effective operation of the German developments.

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The bulk of the intelligence reports on German developments received in the United States [stemmed from the British effort noted above] although a coordinated but limited collection activity aimed at enemy air material^{air?} was established by agreement between the U.S. Navy and Army Air Corps. In addition to these activities there was a small group in the Manhattan Engineering District following intelligence on German atomic energy development (See Tab A).

The problem of information handling was critical and a central reading panel between Army, Navy and OSD was established under the JCS structure to review all documents relating to electronics and new weapons and to route information directly to the technical and planning agencies on the basis of standing reading requirements.

At the end of the war, most of the organized effort along these lines was demobilized and the people planning operations and the application of new technical ideas to operations were completely on their own.

Dr. Vannevar^a Bush, wartime head of the Office of Scientific Research and Development and subsequently, the Chairman of the

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Joint Research and Development Board, (now RDB) had long been concerned with the problems of intelligence. Dr. Bush was particularly interested in those phases of intelligence dealing with enemy capabilities and intentions in research and development and with the products of research and development in the form of new weapons, devices and techniques for warfare, and new industrial processes which add to the potential of modern nations. He was most concerned with intelligence of research and development leading to weapons of mass destruction.

Shortly after the Joint Research and Development Board was formed in July 1946, a group of scientific advisors was established to review the entire field of U.S. research and development and to advise the Board on the major problems in research and development then affecting the national security. This group, was under the chairmanship of Dr. I.I. Rabi (Nobel prize winner, of Columbia University) and included Dr. George Doriot of the Harvard Business School, Dr. William Shockley, Bell Laboratories, Dr. C. P. Haskins, and Dr. A. L. Loomis. At the organizational meeting of the group,

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it was concluded that the most important problem of research and development in relation to national security was adequate intelligence of the scientific and technical capabilities and intentions of potential enemy nations. Consequently, the first regular meeting of the technical advisor group was devoted entirely to a review of the problems of intelligence, particularly scientific and technical intelligence, with Gen. Vandenberg, the Director of CIG, with Mr. Allen ^W Dulles and Mr. William J. Donovan. As a result of this meeting, a "Program for JRDB - CIG cooperation in the field of scientific intelligence" was established, the agreement being signed by Gen. Vandenberg and Dr. Bush, as Chairman of the Joint Research and Development Board on 10 January 1947. This paper defined scientific intelligence and discussed the need for the establishment of "the Scientific Branch, ORR, CIG." The paper outlined the basis on which the Branch would be established, the responsibilities of the Branch, and the relationships between CIG and JRDB. The Board agreed to attempt to find an outstanding civilian scientist to head this Branch.

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Subsequently, an effort was made on the part of Dr. Bush, the Secretariat, and the top scientific personnel associated with the Board to obtain an outstanding civilian scientist who would assume the responsibilities of directing the scientific intelligence effort within SIG. This search proved to be most difficult but finally a capable scientist was ^ep^ursuaded to accept the position. However, due to various factors beyond his control, the arrangement did not produce the desired results.

In March, 1948, the DCI asked the Chairman of the RDB to be released from the obligations of the JRRB-SIG agreement as he felt passage of the National Security Act of 1947 took its place.

In reply to this request, Dr. Bush said in part:

"I believe you will not misunderstand me if I state that thus far I do not feel that the Board has been supplied with adequate scientific intelligence for its guidance. In fact, some of this may indeed have been due to a lack of full accomplishment in aiding you on our part..... It is, however, essential for our affairs that we have adequate scientific intelligence in which we can place full confidence."

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"I trust that the organizational changes which you are now making and other steps under consideration may result in all of your clients being completely served in connection with their needs so that they can act on your information with full confidence. Quite frankly, this matter of confidence in my

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He also said:

"My primary hope is, however, that RDB will in the future receive full scientific intelligence for its purposes, and that there will be complete confidence that it can rely on that intelligence with full confidence."

In 1948 the RDB was called to appear before the Committee on the

National Security Organization of the Commission on Organization

of the Executive Branch of the Government, (the "Eberstadt Committee"

of the "Hoover Commission"). As a result of the RDB appearance

before it, this committee said:

"The Committee is particularly concerned over the nation's inadequacies in the fields of scientific and medical intelligence. There are difficulties peculiar to this situation which the Committee has not overlooked. Yet the vital importance of reliable and up-to-date scientific and medical information is such as to call for far greater efforts than appear to have been devoted to this essential need in the past."

The RDB reviewed the problems of scientific and technical intelligence

with the Dulles Committee which found:

"The field of scientific and technological intelligence is an example of lack of coordination; responsibilities are scattered, collection efforts are uncoordinated, atomic energy is divorced from scientific intelligence generally, and there is no recognized procedure for arriving at authoritative intelligence estimates in the scientific field, with the possible exception of atomic energy matters."

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In order to move toward correction of many of the difficulties pointed out by these two important committees, steps were taken to establish a separate office with the responsibility for scientific and technical intelligence in CIA.

-11- TOP SECRET

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III. Establishment and Initial Organization of the Office of Scientific Intelligence.

The Office of Scientific Intelligence was established on 31 December 1948 in accordance with CIA General Order No. 13.

This order directed that the Office would serve:

"as the primary intelligence evaluation, analysis, and production component of CIA with exclusive responsibility for the production and presentation of national scientific intelligence."

Dr. Willard Machle was appointed to head up the new office as the Assistant Director for Scientific Intelligence. A Table

of Organization, providing a total

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and for the most part the initial staff was absorbed from the Office of Research and Estimates (Scientific Branch). A significant exception was the transfer of the Nuclear Energy Group, Office of Special Operations, to the new office, thus correcting an unsatisfactory situation specifically noted by the Dullas Committee. The history of the U.S. atomic energy intelligence activity since its inception is covered in Tab A.

The inclusion of the nuclear energy intelligence unit in the Office of Scientific Intelligence gave the office a staffed and

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Date 24 Jan 91

Approved For Release 2003/12/09 : CIA-RDP84-00022R000300090002-1

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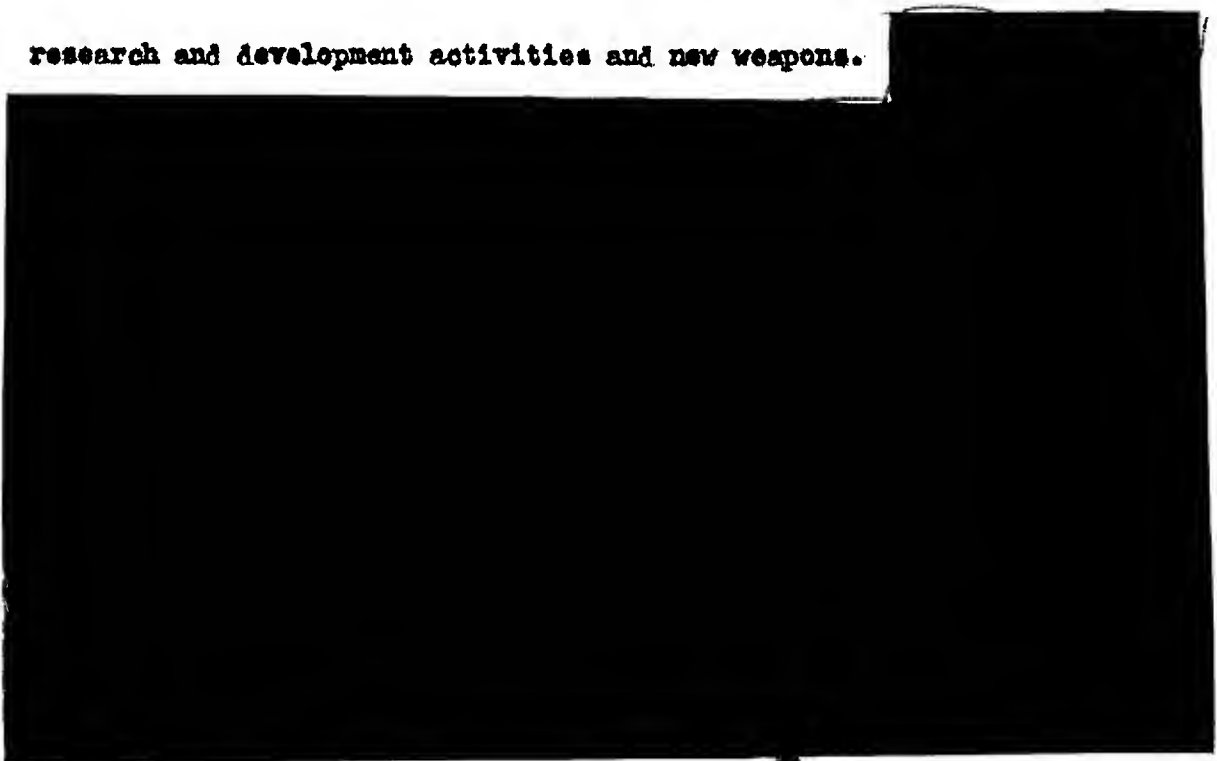
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DOC. NO.	-	DATE DOCUMENT RECEIVED	25X1
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NUMBER OF PAGES	101		
NUMBER OF ATTACHMENTS	Chart (Secret)		

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